

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 2

#### **AMENDMENTS TO THE CLAIMS**

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled. The following list of claims is intended to replace all prior versions or listings of claims in the application.

**Listing of Claims:**

1. **(Currently Amended)** An-apparatus A communication device comprising:  
a physical layer having:  
    a first receiver able to receive data frames of a first modulation type;  
    a second receiver able to receive data frames of a second modulation type;  
    an autodetection module able to automatically detect whether an incoming frame is of the first modulation type or the second modulation type; and  
    a physical layer controller able to configure [[a]] the communication device to operate in a mode of communication selected from a first communication mode, in which the first receiver a-physical layer of the communication device is configured to receive the data frames transmissions of [[a]] the first modulation type, a second communication mode, in which the second receiver physical layer is configured to receive the data frames transmissions of [[a]] the second modulation type, and an autodetection mode, in which the autodetection module is to activate either the first receiver or the second receiver communication device is able to automatically detect whether an incoming transmission is of the first modulation type or the second modulation type.
2. **(Currently Amended)** An-apparatus The communication device according to claim 1, wherein the first modulation type comprises Complementary Code Keying and wherein the second modulation type comprises Orthogonal Frequency Division Multiplexing.
3. **(Cancelled)**

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 3

4. (Currently Amended) An-apparatus The communication device according to claim 1 wherein said controller is able to configure said communication device based on at least one criterion relating to a prior transmission received or transmitted by the communication device.

5. (Currently Amended) An-apparatus The communication device according to claim 4 wherein said prior transmission comprises an outgoing Request To Send frame modulated in one of said first and second modulation types, and wherein the controller is able to configure said communication device to operate in either said first or second communication modes based on the modulation type of said Request To Send frame.

6. (Currently Amended) An-apparatus The communication device according to claim 5 wherein said communication device is configured to receive a Clear To Send frame in said first or second communication modes based on said Request To Send frame.

7. (Currently Amended) An-apparatus The communication device according to claim 4 wherein said prior transmission comprises an outgoing data frame modulated in one of said first and second modulation types, and wherein the controller is able to configure said communication device to operate in either said first or second communication modes based on the modulation type of said outgoing data frame.

8. (Currently Amended) An-apparatus The communication device according to claim 7 wherein said communication device is configured to receive an Acknowledgement frame in said first or second communication modes based on said outgoing data frame.

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 4

9. **(Currently Amended)** A method comprising:

receiving an incoming data frame of either a first modulation type or a second modulation type; and

configuring a communication device to operate in a mode of communication selected from a first communication mode, in which a first receiver physical-layer of the communication device is configured to receive transmissions data frames of [[a]] the first modulation type, a second communication mode, in which a second receiver the physical-layer is configured to receive transmissions data frames of [[a]] the second modulation type; and an autodetection mode, in which an autodetection module, the communication device is able to automatically detect whether an incoming transmission data frame is of the first modulation type or the second modulation type and to activate either the first receiver or the second receiver.

10. **(Cancelled)**

11. (Original) A method according to claim 9, wherein the first modulation type comprises Complementary Code Keying and wherein the second modulation type comprises Orthogonal Frequency Division Multiplexing.

12. (Original) A method according to claim 9 wherein configuring said communication device comprises configuring the communication device based on at least one criterion relating to a prior transmission received or transmitted by the communication device.

13. (Original) A method according to claim 12, wherein said prior transmission comprises an outgoing Request To Send frame modulated in one of said first and

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 5

second modulation types, and wherein configuring comprises configuring said communication device to operate in either of said first or second communication modes based on the modulation type of said Request To Send frame.

14. (Original) A method according to claim 13, further comprising:

receiving a Clear To Send frame in the modulation type of said Request To Send frame.

15. (Original) A method according to claim 12 wherein said prior transmission comprises an outgoing data frame modulated in one of said first and second modulation types, and wherein configuring comprises configuring said communication device to operate in either said first or second communication modes based on the modulation type used to transmit said outgoing data frame.

16. (Original) A method according to claim 15 further comprising

receiving an Acknowledgement frame in the modulation type of said data frame.

17. (**Currently Amended**) A wireless communication device comprising:

an antenna able to send and receive data frames transmissions;

a physical layer having:

a first receiver able to receive data frames of a first modulation type;

a second receiver able to receive data frames of a second modulation type;

an autodetection module able to automatically detect whether an incoming frame is of the first modulation type or the second modulation type; and

a physical layer controller able to configure the communication device to operate in a mode of communication selected from a first communication mode, in

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 6

which [[a]] the first receiver of the communication device is configured to receive the data frames transmissions of [[a]] the first modulation type, a second communication mode, in which the second receiver is configured to receive the data frames transmissions of [[a]] the second modulation type, and an autodetection mode, in which the autodetection module is to activate either the first receiver or the second receiver is configured to automatically detect whether an incoming transmission is of the first modulation type or the second modulation type.

18. (Original) A wireless communication device according to claim 17, wherein the first modulation type comprises Complementary Code Keying and wherein the second modulation type comprises Orthogonal Frequency Division Multiplexing.

19. (Original) A wireless communication device according to claim 17 wherein the controller is able to configure said receiver based on at least one criterion relating to a prior transmission received or transmitted by the communication device.

20. (Original) A wireless communication device according to claim 19 wherein said prior transmission comprises an outgoing Request To Send frame, in one of said first and second modulation types, and wherein the controller is able to configure said receiver to operate in either of said first or second communication modes based on the modulation type of said Request To Send frame.

21. (Original) A wireless communication device according to claim 19 wherein said prior transmission comprises an outgoing data frame in one of said first and second modulation types, and wherein the controller is able to configure said receiver to operate in either of said first or second communication modes based on the modulation type of said outgoing data frame.

22. (**Currently Amended**) A wireless communication system comprising:  
a first communication station able to send a data frame transmission; and

APPLICANT(S): TRAININ, Solomon B. et al.  
SERIAL NO.: 10/811,906  
FILED: March 30, 2004  
Page 7

a second communication station comprising:

a physical layer having:

a first receiver able to receive said transmission data frames of a first modulation type;

a second receiver able to receive data frames of a second modulation type;

an autodetection module able to automatically detect whether an incoming frame is of the first modulation type or the second modulation type;  
and

a physical layer controller able to configure the receiver to operate in a communication mode selected from a first communication mode, in which the first receiver is configured to receive the data frames of [[a]] the first modulation type, a second communication mode, in which the second receiver is configured to receive the data frames of [[a]] the second modulation type, and an autodetection mode, in which the autodetection module is to activate either the first receiver or the second receiver-is-configured-to-automatically-detect-an-incoming-modulation-type-as-being-either-the-first-modulation-type-or-the-second-modulation-type.

23. (Original) A wireless communication system according to claim 22, wherein the first modulation type comprises Complementary Code Keying and wherein the second modulation type comprises Orthogonal Frequency Division Multiplexing.

24. (Original) A wireless communication system according to claim 22 wherein said controller is able to configure said receiver based on at least one criterion relating to a prior transmission received or transmitted by the second communication station.

APPLICANT(S): TRAININ, Solomon B. et al.

SERIAL NO.: 10/811,906

FILED: March 30, 2004

Page 8

25. (Original) A wireless communication system according to claim 24 wherein said prior transmission comprises an outgoing Request To Send frame from the second station, in one of said first and second modulation types, wherein the

controller is able to configure the receiver to operate in either said first or second communication modes based on the modulation type of said Request To Send Frame, and wherein the receiver is able to receive a Clear To Send frame sent by the first station in the modulation type of said Request To Send frame.

26. (Original) A wireless communication system according to claim 24 wherein said prior transmission comprises an outgoing data frame from the second station, in one of said first and second modulation types, wherein the controller is able to configure said receiver to operate in either said first or second communication modes based on the modulation type of said outgoing data frame, and wherein the receiver is able to receive an Acknowledgement frame sent by the first station in the modulation type of said Request To Send frame.

27. (**Currently Amended**) An article comprising a computer-readable storage medium, having stored thereon instructions that, when executed by a computing platform, result in:

receiving an incoming data frame of either a first modulation type or a second modulation type; and

configuring a communication device to operate in a mode of communication selected from a first communication mode, in which a first receiver physical-layer of the communication device is configured to receive transmissions data frames of [[a]] the first modulation type, a second communication mode, in which a second receiver physical-layer is configured to receive transmissions data frames of [[a]] the second modulation type; and an autodetection mode, in which an autodetection module the communication device is able to automatically detect whether an the incoming transmission data frame is of the first modulation type or

APPLICANT(S): TRAININ, Solomon B. et al.  
SERIAL NO.: 10/811,906  
FILED: March 30, 2004  
Page 9

the second modulation type and to activate either the first receiver or the second receiver.

28. **(Cancelled)**

29. (Original) The article of claim 27, wherein the first modulation type comprises Complementary Code Keying and wherein the second modulation type comprises Orthogonal Frequency Division Multiplexing.

30. (Original) The article of claim 27 wherein the instructions result in configuring the communication device based on at least one criterion relating to a prior transmission received or transmitted by the communication

31. (Original) The article of claim 30 wherein said prior transmission comprises an outgoing Request To Send frame modulated in one of said first and second modulation types, and wherein configuring comprises configuring said communication device to operate in either of said first or second communication modes based on the modulation type of said Request To Send frame.

32. (Original) The article of claim 30 wherein said prior transmission comprises receiving a Clear To Send frame in the modulation type of said Request To Send frame.